

Impact Evaluation on Mosquito Control

The purpose of the study is to determine if changes in TVA's reservoir system operating policies would produce greater overall public value.

Background

TVA is conducting a formal evaluation of its policies for operating the Tennessee River reservoir system, including an analysis of the economic impacts of any potential changes in these policies. Existing policies affect how much reservoir levels fluctuate, when changes in reservoir levels occur, and the amount of water flowing through the reservoir system at different times of the year, depending on rainfall.

The purpose of the study is to determine if changes in TVA's reservoir system operating policies would produce greater overall public value. Technical analyses will be performed to evaluate the impacts of TVA's current policies and the potential impacts of alternatives on a number of resource areas and other issues.

The two-year Reservoir Operations Study (ROS) is scheduled for completion in October 2003.

The impacts on mosquito control will be evaluated as part of the ROS, and the results will be documented in an Environmental Impact Statement (EIS). TVA will conduct the study in accordance with National Environmental Policy Act (NEPA) requirements.

Potential Impacts

- All mosquito species require some form of standing water to live, and many are dependent on aquatic plant cover during their development.
- More than 50 species of mosquitoes have been recorded within the Tennessee Valley, and 12 species are considered to be significant nuisance pests breeding within or around TVA reservoirs or watersheds.
- Of these 12 pest species, eight have been identified as potential carriers of West Nile virus, and five are known carriers of eastern equine encephalitis (EEE).
- Water level fluctuations are highly effective in reducing the number of mosquitoes generated within reservoirs, and these fluctuations have played an important role in limiting disease-carrying mosquitoes and malaria throughout the Valley.
- How reservoir levels fluctuate and when changes occur affect aquatic plant growth. The amount of aquatic plants, in turn, impacts mosquito production and, consequently, the level of nuisance mosquitoes.

Geographic Areas

- Mosquito breeding habitats within areas influenced by TVA reservoir operations primarily include shallow, protected shorelines with submersed aquatic plants, backwater sloughs with emergent vegetation, flooded riparian zones, and beaver ponds.

Scope of Analysis

- TVA will explore potential increases in mosquito populations by analyzing mosquito production during previous water level fluctuations to identify the effects on species that could potentially serve as disease carriers.
- The final results will be based upon a qualitative analysis of mosquito production in response to different reservoir levels.

For More Information

To submit comments or get additional information, members of the public are invited to visit TVA's Web site at www.tva.com, to call toll-free 888-882-7675, to fax TVA at 865-632-3146, or to write to ROS Project Manager David Nye, Tennessee Valley Authority, c/o WT 11A, 400 West Summit Hill Dr., Knoxville, TN 37902.